

Date: Mon, 25 Oct 93 04:30:31 PDT  
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>  
Errors-To: Ham-Space-Errors@UCSD.Edu  
Reply-To: Ham-Space@UCSD.Edu  
Precedence: Bulk  
Subject: Ham-Space Digest V93 #66  
To: Ham-Space

Ham-Space Digest                      Mon, 25 Oct 93                      Volume 93 : Issue    66

Today's Topics:

                    ANS-296 BULLETINS  
                    DSP12 fsk jumper position question.  
                    SAREX Operations 10/23/93  
                    STS-58 QRZ QSL lists...

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>  
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

-----

Date: Sun, 24 Oct 1993 18:35:12 MDT  
From: destroyer!nntp.cs.ubc.ca!alberta!nebulus!ve6mgs!usenet@uunet.uu.net  
Subject: ANS-296 BULLETINS  
To: ham-space@ucsd.edu

SB SAT @ AMSAT    \$ANS-296.01  
STS-58 SAREX MISSION INFO

HR AMSAT NEWS SERVICE BULLETIN 296.01 FROM AMSAT HQ  
SILVER SPRING, MD OCTOBER 23, 1993  
TO ALL RADIO AMATEURS BT  
BID: \$ANS-296.01

STS-58 Makes A Picture Perfect Lift-Off; SAREX Operations Begin

The STS-58 Shuttle Amateur Radio Experiment (SAREX) mission began this  
past week with a "picture-perfect" lift-off on Monday, 18-OCT-93 at  
14:53:10 UTC. On this particular SAREX mission the amateur radio station  
consists of a 2M FM transceiver and a packet radio TNC. To log the packet

station contacts, the SAREX payload also includes a laptop computer. In addition to school contacts, there the packet station will be in operation for unattended "robot" packet contacts. For radio amateurs who make or hear the SAREX station, you are invited to send a QSL card to confirm a packet or voice contact or a SWL report. Send your QSL card to the following address:

ARRL, STS-58 QSL  
225 Main Street  
Newington, CT  
06111

Please allow for up to 6-10 months for the STS-58 SAREX Mission QSL card to be mailed. Please include with your QSL card all the specific QSO information such as, date, time, mode, frequency, etc. Also, and most importantly, if you wish to receive a QSL card confirming a contact, YOU MUST INCLUDE A SELF-ADDRESS-STAMPED-ENVELOPE (SASE) WITH PROPER POSTAGE! If you do not include a SASE, you will not receive a QSL card.

The following information includes the latest keplerian elements and SAREX frequencies.

STS-58

1	22869U	93 65	A	93296.93203712	.00108994	00000-0	20250-3 0	114
2	22869	39.0185	93.7039	0015567	16.4294	343.6980	15.99752782	868

Satellite: STS-58

Catalog number: 22869

Epoch time: 93296.93203712 (23 OCT 93 22:22:08.00 UTC)

Element set: 011

Inclination: 39.0185 deg

RA of node: 93.7039 deg Space Shuttle Flight STS-58

Eccentricity: .0015567 Keplerian Element set JSC-011

Arg of perigee: 16.4294 deg from NASA flight Day 6 vector

Mean anomaly: 343.6980 deg

Mean motion: 15.99752782 rev/day Gil Carman, WA5NOM

Decay rate: 1.08994e-03 rev/day^2 NASA Johnson Space Center

Epoch rev: 86

Checksum: 345

STS-58 Shuttle Amateur Radio Experiment (SAREX) Information Sheet:

Mission: STS-58 Space Shuttle Columbia

Spacelab Life Sciences-2 (SLS-2) Mission

Launch: 18-OCT-1993, 14:53:10.06 UTC

Orbit: 39 degrees orbital inclination

Mission Length: 14 days (Nominal); Return 01-NOV-93 11:26:10 UTC

Amateur Radio

Operators: Bill McArthur (KC5ACR), Marty Fettman (KC5AXA),  
Rick Searfoss, (KC5CKM)

Modes: FM Voice

Prime callsign KC5ACR

Packet Radio

Callsign W5RRR-1

Frequencies: All operations in split mode. Do not transmit on  
the downlink frequency.

Voice Freqs: Downlink: 145.55 MHz (Worldwide)  
Uplinks: 144.91, 144.93, 144.95, 144.97, 144.99 MHz  
(Except Europe)  
144.70, 144.75, 144.80 MHz (Europe only)

Note: The crew will not favor any specific uplink  
frequency, so your ability to work the crew will  
be the "luck of the draw."

Packet Freqs: Downlink: 145.55 MHz  
Uplink: 144.49 MHz

Info: Goddard Amateur Radio Club, WA3NAN, Greenbelt Maryland,  
SAREX Bulletins and Shuttle Retransmissions  
3.860 MHz, 7.185 MHz, 14.295 MHz, 21.395 MHz, 28.650 MHz  
and 147.450 MHz (FM)

Johnson Space Center ARC, W5RRR, Houston, Texas  
SAREX Bulletins 7.225 MHz, 14.280 MHz, 21.395 MHz,  
28.650 MHz, (SSB) and 146.64 MHz (FM)

ARRL Amateur Radio Station, W1AW, Newington, CT  
SAREX News Bulletins  
3.990 MHz, 7.290 MHz, 14.290 MHz, 18.160 MHz, 21.390 MHz

[The AMSAT News Service (ANS) would like to thank Frank Bauer (KA3HDO) for  
this bulletin item.]

/EX

SB SAT @ AMSAT \$ANS-296.02  
AO-21 NEW VOICE MESSAGE

HR AMSAT NEWS SERVICE BULLETIN 296.02 FROM AMSAT HQ  
SILVER SPRING, MD OCTOBER 23, 1993  
TO ALL RADIO AMATEURS BT  
BID: \$ANS-296.02

AO-21 Has A New Vocie Message

RUDAK/AO-21 is transmitting a new series of Voice Broadcast until about middle of November. The Digi-Voice Messages will be transmitted in several languages, including German, Spanish, English, Russian and French. There is currently also a greetings message broadcastet in Czech language.

FM-Mode is also in use, and likewise the 1200 Baud AX.25 AFSK telemetry. The telemetry includes bulletins with the current operating schedule. New transmitting modes are scheduled starting end of November, so please stay tuned on AO-21. Look for AO-21's voice message on a downlink frequency of 145.987 MHz.

[The AMSAT News Service (ANS) would like to thank DB20S for the information which went into this bulletin item.]

/EX

SB SAT @ AMSAT \$ANS-296.03  
AMSAT OPS NET SCHEDULE

HR AMSAT NEWS SERVICE BULLETIN 296.03 FROM AMSAT HQ  
SILVER SPRING, MD OCTOBER 23, 1993  
TO ALL RADIO AMATEURS BT  
BID: \$ANS-296.03

Current AMSAT Operations Net Schedule For AO-13

AMSAT Operations Nets are planned for the following times. Mode-B Nets are conducted on AO-13 on a downlink frequency of 145.950 MHz. If, at the start of the OPS Net, the frequency of 145.950 MHz is being used for a QSO, OPS Net enthusiasts are asked to move to the alternate frequency of 145.955 MHz.

Date	UTC	Mode	Phs	NCS	Alt NCS
30-Oct-93	1300	B	62	W5IU	WB6LLO
13-Nov-93	1230	B	146	VE2LVC	W5IU
28-Nov-93	0230	B	39	WJ9F	VE2LVC

Any stations with information on current events would be most welcomed.

Also, those interested in discussing technical issues or who have questions about any particular aspect of OSCAR statellite operations, are encouraged to join the OPS Nets. In the unlikely event that either the Net Control Station (NCS) or the alternate do not call on frequency, any participant is invited to act as the NCS.

\*\*\*\*\*

#### Slow Scan Television on AO-13

SSTV sessions will be held on immediately after the OPS Nets a downlink on a Mode-B downlink frequency 145.960 MHz.

/EX

SB SAT @ AMSAT \$ANS-296.04  
WEEKLY OSCAR STATUS REPORTS

HR AMSAT NEWS SERVICE BULLETIN 296.04 FROM AMSAT HQ  
SILVER SPRING, MD OCTOBER 23, 1993  
TO ALL RADIO AMATEURS BT  
BID: \$ANS-296.04

Weekly OSCAR Status Reports: 23-OCT-93

#### AO-13: Current Transponder Operating Schedule:

M QST \*\*\* AO-13 TRANSPONDER SCHEDULE \*\*\* 1993 Oct 25-Nov 15

Mode-B : MA 0 to MA 130 !

Mode-BS : MA 130 to MA 180 !

Mode-S : MA 180 to MA 205 !<- S transponder; B trsp. is OFF

Mode-S : MA 205 to MA 210 !<- S beacon only

Mode-BS : MA 210 to MA 226 ! Blon/Blat 210/0

Omnis : MA 240 to MA 80 ! Move to attitude 240/0, Nov 15

Please don't uplink to Mode-B between MA 180-205 as this interferes with Mode-S transponder operations. Reorientation from Attitude 180/0 to 210/0: A magnetorque will be initiated on Orbit #4105 MA 224 [Oct 24 @ 03:48 UTC] and will be executed over 4 perigees, completing on Orbit #4109 MA 32 [Oct 25 @ 17:00 UTC]. The new schedule, as per M-block, will be invoked Orbit #4109 MA 140, and thus that orbit (only) will contain two Mode-S sessions. Continuous up-to-date information about AO-13 operations is always available on the beacons at 145.812 MHz and 2400.646 MHz in CW, RTTY and 400 bps PSK. Also, these bulletins are also posted to INTERNET, ANS bulletins, Packet, PACSATs, as well as many international newsletters.  
[G3RUH/DB20S/VK5AGR]

AO-16: Operating normally. [WH6I]

UO-22: Operating normally. [WH6I]

LO-19: Operating normally with new software, that is, the same PB/PG as AO-16/UO-22/KITSATs. [WH6I]

KO-23: Up and running. Busy as usual. The images are no longer available.

AO-27: Checkout and experimentation continues with the amateur side of AO-27. For the next several days the 9600 FM downlink will be turned on while the satellite is in view of the command station (N4TPY/N4USI/KA1LM) near Washington, DC. Appropriately equipped amateurs are encouraged to observe the eye pattern of the 9600 baud signal and report results to Mike Wyrick (N4USI) at "wyrick@interf.com" or Steve Greene (KA1LM) at "ka1lm@amsat.org." Methods of adding de-emphasis to level the amplitude of the data "tones" while receiving the signal directly from the discriminator of the receiver are of particular interest. The downlink frequency for the 9600 data rate is about 4 KHz lower than when the 1200 baud data rate is in use (436.800 MHz). Please report all results to Mike or Steve only. PLEASE DO NOT TRANSMIT TO THE SATELLITE AS YOU MAY INTERFERE WITH ONGOING TESTING AND CHECKOUT! [KB2BD & WD0E ]

KO-25: The file system is up and running but not open for uploads.

The AMSAT NEWS Service (ANS) is looking for volunteers to contribute weekly OSCAR status reports. If you have a favorite OSCAR which you work on a regular basis and would like to contribute to this bulletin, please send your observations to WD0HHU at his CompuServe address of 70524,2272, on INTERNET at wd0hhu@amsat.org, or to his local packet BBS in the Denver, CO area, WD0HHU @ W0LJF.#NECO.CO.USA.NOAM. Also, if you find that the current set of orbital elements are not generating the correct AOS/LOS times at your QTH, PLEASE INCLUDE THAT INFORMATION AS WELL. The information you provide will be of value to all OSCAR enthusiasts.

/EX

-----  
Date: 24 Oct 1993 10:22:24 -0500  
From: dog.ee.lbl.gov!agate!howland.reston.ans.net!usc!cs.utexas.edu!not-for-mail@network.ucsd.edu  
Subject: DSP12 fsk jumper position question.  
To: ham-space@ucsd.edu

Path: news.csuohio.edu!news.uakron.edu!malgudi.oar.net!caen!math.ohio-state.edu!cs.utexas.edu!not-for-mail  
From: bmm1@freenet.scri.fsu.edu (Bruce M. Marshall)  
Newsgroups: rec.radio.amateur.digital.misc  
Subject: DSP12 fsk jumper position question.  
Date: 23 Oct 1993 13:55:45 -0500

Organization: UTexas Mail-to-News Gateway  
Lines: 7  
Sender: daemon@cs.utexas.edu  
Message-ID: <199310231856.AA122965@freenet.scri.fsu.edu>  
NNTP-Posting-Host: cs.utexas.edu

I opened up my DSP 12 to move the jumper for FSK output on the HF port. The manual says that it is a 3pin jumper. Mine has a 5pin jumper. Does anyone have the correct information on this?

Thanks,  
Bruce.

--

Bruce M. Marshall bmm1@freenet.fsu.edu voice 615 481 0990 fax 615 481 8039

-----  
Date: Sat, 23 Oct 1993 20:38:27 -0600  
From: dog.ee.lbl.gov!agate!library.ucla.edu!news.mic.ucla.edu!unixg.ubc.ca!  
nntp.cs.ubc.ca!alberta!nebulus!ve6mgs!usenet@network.ucsd.edu  
Subject: SAREX Operations 10/23/93  
To: ham-space@ucsd.edu

SB SAREX @ AMSAT \$STS-58.017  
SAREX Operations 10/23/93

To date, the Shuttle Amateur Radio Experiment operations on the Space Shuttle Columbia have been outstanding. Nearly 300 general QSO packet connects have been completed since SAREX operation was initiated on Tuesday October 19. In addition, several hams have reported general voice contacts in the U.S. and abroad.

SAREX school group contacts have been impressive during this mission. In most cases, full quieting radio links have been established early in the pass and the school question and answer session has continued through to the scheduled loss of signal. On October 21, the Lycee Gaston Febus school in Pau, France had a telebridge contact with the astronauts. Jean-Marc Dumont, the France school coordinator reports that over 10,000 students throughout France listened to the contact through a national repeater link.

To date, the following schools have successfully completed their contact: Russellville H.S., Russellville, Arkansas, Red Springs HS, Red Springs North Carolina, Alamo Heights

JHS, San Antonio, Texas, Bloomfield School, Bloomfield, Missouri, Lloyd Ferguson Elementary, League City, Texas, Sycamore Middle School, Pleasant View, Tennessee, Gardens Elementary, Pasadena, Texas, Carl Hayden HS, Phoenix, Arizona, Meyzeek Middle School, Louisville, Kentucky, and the Webber JHS, Ft. Collins, Colorado. All these contacts were direct between the schools and the shuttle. In addition, many of the students have had the unique fortune of seeing downlink video of SAREX operations on the shuttle flight deck during their contact.

The outstanding success of the school contacts will provide a potential bonus for the general ham community. The SAREX team is currently working to change a planned backup school group pass into a scheduled general QSO pass. Although we cannot fully guarantee availability, there is a very high probability that the STS-58 crew will be ready and waiting to take general calls over the continental U.S on orbit 116. This will occur at an approximate mission elapsed time of 7 days 4 hours and 54 minutes or 13:47 MDT on Monday October 25. Please consult your orbit prediction program or recent rise-set times to determine when the Shuttle will be overhead in your area. Also, it should be noted that packet operations are expected to continue tonight through the astronaut sleep period.

The following represents the post burn Keplerian elements as generated by Gil Carman, WA5NOM, of the Johnson Space Flight Center:

STS-58

1	22869U	93 65	A	93296.93203712	.00108994	00000-0	20250-3 0	114
2	22869	39.0185	93.7039	0015567	16.4294	343.6980	15.99752782	868

Satellite: STS-58

Catalog number: 22869

Epoch time: 93296.93203712 (23 OCT 93 22:22:08.00 UTC)

Element set: 011

Inclination: 39.0185 deg

RA of node: 93.7039 deg

Eccentricity: .0015567

Arg of perigee: 16.4294 deg

Mean anomaly: 343.6980 deg

Mean motion: 15.99752782 rev/day

Decay rate: 1.08994e-03 rev/day^2

Epoch rev: 86

Checksum: 345

Space Shuttle Flight STS-58  
Keplerian Element set JSC-011  
from NASA flight Day 6 vector

Gil Carman, WA5NOM  
NASA Johnson Space Center



/EX

W5RRR-1>QRZ [10/21/93 18:11:08] <UI>:  
#96-KD6PPM N7SUF N6RME N6CNG AA6TA KC6ROL WD6GYU  
WB6CVJ KD6JDG W6BME N7RYQ VK6ZLK VK6KS ZS6ADS WA4GS0

W5RRR-1>QRZ [10/24/93 16:39:25] <UI>:  
#515-WA6LIE KJ6MD AA6TA WA6IEO KB7ADO DL5KR W6BME  
N7RYW WD5BJT VK6KCH VK3YJM VK5AW VK6RFI VK6ECM VK6NT  
EA7HBY EA8BRW EB8BTK EB8BVU K4FJ W0RRY N50K KB5YKV F1SYY  
IW0EFI IV3WLQ EA6IC F1BAV F5OZF EA8BRV KA4IWG MK N4AA  
WB9ZLM KA9VTO

— —

-----

End of Ham-Space Digest V93 #66  
\*\*\*\*\*